

Claims

1. Electric motor for driving a compressor wheel accommodated in a compressor housing, said electric motor being supplied with electric power through at least one motor plug connector, **characterized in that**

said motor plug connector is disposed on an axial side of said electric motor, facing said compressor housing.

2. Electric motor according to claim 1, wherein said motor plug connector is formed as a male plug connector.

3. Electric motor according to claim 1, wherein said motor plug connector is formed as a female plug connector.

4. Electric motor according to claim 1, wherein a plurality of said motor plug connectors is arranged at equal intervals on a circle around the axis of the electric motor.

5. Electric motor according to claim 1, wherein the motor plug connectors are blade-shaped and extend in an axial direction of the electric motor.

6. Electric motor according to claim 5, wherein the motor plug connectors are slanted with respect to the radial direction of the electric motor.

7. Electric motor according to claim 5, wherein the motor plug connectors are perpendicular to the radial direction of the electric motor.

8. Electric motor according to any of claims 5 to 7, provided with six motor plug connectors each of which is a connector to a lead wire.

9. Electric motor according to any of the preceding claims, accommodated in an electric motor cartridge, wherein said at

least one motor plug connector penetrates the electric motor cartridge.

10. Compressor housing for accommodating a compressor wheel drivable by an electric motor, **characterized in that** said compressor housing comprises

at least one main power plug connector connectable to an electric power source; and

at least one housing plug connector electrically connected to a respective one of the at least one main power plug connector for supplying said electric motor with electric power, wherein

said housing plug connector is disposed on an axial side of said compressor housing, facing said electric motor.

11. Compressor housing according to claim 10, wherein said housing plug connector is formed as a female plug connector.

12. Compressor housing according to claim 10, wherein said housing plug connector is formed as a male plug connector.

13. Compressor housing according to claim 11 or 12, wherein said at least one main power plug connector is connected to said at least one housing plug connector via a printed circuit board.

14. Compressor housing according to claim 10, wherein a plurality of said housing plug connectors is arranged by equal intervals on a circle around the axis of the compressor housing.

15. Compressor housing according to claim 14, wherein a plurality of main power plug connectors is arranged as a bundle on the side of the printed circuit board opposite to the side where the housing plug connectors are disposed.

16. Compressor housing according to claim 15, wherein the housing plug connectors are slot-shaped and extend in an axial direction of the compressor housing.

17. Compressor housing according to claim 16, wherein housing plug connectors are slanted with respect to the radial direction of the compressor housing.

18. Compressor housing according to claim 16, wherein housing plug connectors are perpendicular to the radial direction of the compressor housing.

19. Compressor housing according to any of claims 16 to 18, provided with six housing plug connectors each of which is a connector to a lead wire.

20. Compressor housing according to any of claims 15 to 19, wherein the printed circuit board is provided with at least one track for connecting each of the main power plug connectors to the respective one of the housing plug connectors.

21. Compressor housing according to claim 20, wherein the printed circuit board is provided with three tracks.

22. Compressor housing according to any of claims 13 to 21, wherein the printed circuit board is circular and disposed coaxial to a volute of the compressor housing between said volute and the compressor wheel.

23. Turbocharger comprising an electric motor for driving a compressor wheel accommodated in a compressor housing, said electric motor being supplied with electric power through at least one motor plug connector, further comprising
a turbine housing for accommodating a turbine wheel driven by exhaust gas;
a center housing for accommodating a shaft and the electric motor, the shaft serving as a rotor of the electric

motor and extending from the turbine wheel through a journal bearing and the electric motor to the compressor wheel; wherein the compressor wheel is driven by the turbine wheel via the shaft and can additionally be driven by the electric motor,

characterized in that

said motor plug connector is disposed on an axial side of said electric motor, facing said compressor housing.

24. Turbocharger according to claim 23, wherein said motor plug connector is formed as a male plug connector.

25. Turbocharger according to claim 23, wherein said motor plug connector is formed as a female plug connector.

26. Turbocharger according to claim 23, wherein a plurality of said motor plug connectors is arranged at equal intervals on a circle around the axis of the electric motor.

27. Turbocharger according to claim 23, wherein the motor plug connectors are blade-shaped and extend in an axial direction of the electric motor.

28. Turbocharger according to claim 27, wherein the motor plug connectors are slanted with respect to the radial direction of the electric motor.

29. Turbocharger according to claim 27, wherein the motor plug connectors are perpendicular to the radial direction of the electric motor.

30. Turbocharger according to any of claims 26 to 29, provided with six motor plug connectors each of which is a connector to lead wire.

31. Turbocharger according to any of the claims 23 to 30, wherein the electric motor is accommodated in an electric motor

cartridge, wherein said at least one motor plug connector penetrates the electric motor cartridge.

32. Turbocharger comprising a compressor housing for accommodating a compressor wheel drivable by an electric motor, further comprising

a turbine housing for accommodating a turbine wheel driven by exhaust gas;

a center housing for accommodating a shaft and the electric motor, the shaft serving as a rotor of the electric motor and extending from the turbine wheel through a journal bearing and the electric motor to the compressor wheel; wherein the compressor wheel is driven by the turbine wheel via the shaft and can additionally be driven by the electric motor,

characterized in that

said compressor housing further comprises

at least one main power plug connector connectable to an electric power source; and

at least one housing plug connector electrically connected to a respective one of the at least one main power plug connector for supplying said electric motor with electric power, wherein

said housing plug connector is disposed on an axial side of said compressor housing, facing said electric motor.

33. Turbocharger according to claim 32, wherein said housing plug connector is formed as a female plug connector.

34. Turbocharger according to claim 32, wherein said housing plug connector is formed as a male plug connector.

35. Turbocharger according to claim 33 or 34, wherein said at least one main power plug connector is connected to said at least one housing plug connector via a printed circuit board.

36. Turbocharger according to claim 32, wherein a plurality of said housing plug connectors is arranged by equal intervals on a circle around the axis of the compressor housing.
37. Turbocharger according to claim 36, wherein a plurality of main power plug connectors is arranged as a bundle on the side of the printed circuit board opposite to the side where the housing plug connectors are disposed.
38. Turbocharger according to claim 37, wherein the housing plug connectors are slot-shaped and extends in an axial direction of the compressor housing.
39. Turbocharger according to claim 38, wherein housing plug connectors are slanted with respect to the radial direction of the compressor housing.
40. Turbocharger according to claim 38, wherein housing plug connectors are perpendicular to the radial direction of the compressor housing.
41. Turbocharger according to any of claims 38 to 40, provided with six housing plug connectors each of which is a connector to a lead wire.
42. Turbocharger according to any of claims 37 to 41, wherein the printed circuit board is provided with at least one track for connecting each of the main power plug connectors to the respective one of the housing plug connectors.
43. Turbocharger according to claim 42, wherein the printed circuit board is provided with three tracks.
44. Turbocharger according to any of claims 35 to 43, wherein the printed circuit board is circular and disposed coaxial to a volute of the compressor housing between said volute and the compressor wheel.

45. Turbocharger comprising a compressor housing for accommodating a compressor wheel drivable by an electric motor and an electric motor for driving a compressor wheel accommodated in a compressor housing, said electric motor being supplied with electric power through at least one motor plug connector, further comprising

a turbine housing for accommodating a turbine wheel driven by exhaust gas;

a center housing for accommodating a shaft and the electric motor, the shaft serving as a rotor of the electric motor and extending from the turbine wheel through a journal bearing and the electric motor to the compressor wheel; wherein the compressor wheel is driven by the turbine wheel via the shaft and can additionally be driven by the electric motor,

characterized in that

said compressor housing further comprises

at least one main power plug connector connectable to an electric power source; and

at least one housing plug connector electrically connected to a respective one of the main power plug connector for supplying said electric motor with electric power, wherein

said housing plug connector is disposed on an axial side of said compressor housing, facing said electric motor, and

said motor plug connector is disposed on an axial side of said electric motor, facing said compressor housing.

46. Turbocharger comprising a compressor housing according to any of claims 1 to 9 and an electric motor according to any of claims 10 to 22, further comprising

a turbine housing for accommodating a turbine wheel driven by exhaust gas;

a center housing for accommodating a shaft and the electric motor, the shaft serving as a rotor of the electric motor and extending from the turbine wheel through a journal bearing and the electric motor to the compressor wheel; wherein

the compressor wheel is driven by the turbine wheel via the shaft and can additionally be driven by the electric motor.